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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,661	02/15/2007	Yoav Bar-Yaakov	0-06-112	5008

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EXAMINER
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BUIE, NICOLE M

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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07/09/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,661	<b>Applicant(s)</b> BAR-YAAKOV ET AL.	
	<b>Examiner</b> NICOLE M. BUIE	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 25-36 is/are pending in the application.
- 4a) Of the above claim(s) 14-21 and 32-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 25-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060713/20060816</u> .                                       | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group I in the reply filed on 05/20/2008 is acknowledged.

The traversal is on the ground(s) that the PTFE and the flame retardant are mixed together by known techniques in Kitahara et al. (US 6,503,988), but Kitahara et al. does not teach dispersing PTFE in the molten flame retardants. Further the Applicant argues that “it is believed that a skilled person would not have been inspired by Kitahara’s teaching to homogeneously disperse PTFE powder in a molten flame retardant resin.” The Applicant’s arguments are moot in light of new prior art in light of amendment to claim 1. Yamamoto et al. discloses a composition consisting of particles comprising one fluoropolymer (“polytetrafluoroethylene”) and flame retardants (e.g. antimony trioxide) (JP09324093, see machine translation for citation, [0020],[0021]).

**Claims 14-21 and 25-36** are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group II, Group III, Group IV, Group V, Group VI, and Group VII, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 05/20/2008.

This requirement is still deemed proper and is therefore made FINAL.

***Claim Objections***

**Claim 5** is objected to because “fluoropolymer” is(are) not properly claimed in the alternative. See MPEP 2173.05(h).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claim 2** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Regarding claim 2**, the instant claim recites “ a composition consisting of particles” which limits other ingredients from being present. The instant claim also recites "particles comprising one or more fluoropolymers and flame retardants", which may include other ingredients. Therefore this claim is indefinite. For the purpose of this Office action, the claim is interpreted as “a composition comprising particles comprising one or more fluoropolymers and flame retardants.”

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 3, 4-7, 9-11** are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto et al. (JP049324093A, see machine translation for citation).

**Regarding claims 1 and 4**, Yamamoto et al. discloses a composition consisting essentially of a solidified fluoropolymer (“granular PTFE”) in flame retardants (e.g. antimony trioxide, tetrabromobisphenol A) ([0020],[0021]), where when the granular PTFE composition is crushed immediately at the time of melt kneading, the flame retardant distributes uniformly into resin [0007] (which implies the fluoropolymer is evenly dispersed in the flame retardants), absent objective to evidence to the contrary.

Regarding the method limitations of the solidified molten suspension of a fluoropolymer recited in claim(s) 1, the examiner notes that even though a product-by-process is defined by the process steps by which the product is made, determination of patentability is based on the product itself. *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). As the court stated in *Thorpe*, 777 F.2d at 697, 227 USPQ at 966 (The patentability of a product does not depend on its method of production. *In re Pilkington*, 411 F. 2d 1345, 1348, 162 USPQ 145, 147 (CCPA 1969). If the product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process).

**Regarding claim 3**, Yamamoto et al. discloses a composition wherein said fluoropolymer is enveloped by the flame retardant (Since the fluoropolymers are evenly dispersed in flame retardants, the fluoropolymer would be enveloped by the flame retardant) [0007], objective to evidence of the contrary.

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**Regarding claims 5 and 6**, Yamamoto et al. discloses a composition wherein said flame retardants are selected from organic bromine compounds (e.g. brominated bisphenol epoxy resin, tetrabromobisphenol A, brominated polystyrene, brominated alkyl triazine compound) [0018] or phosphorous compounds (e.g. octyl diphenyl phosphate) [0018].

**Regarding claim 7**, Yamamoto et al. discloses a composition containing an amount of fluoropolymer from 0.1 wt% to 50 wt% (as compared to from 0.1 wt% to 60 wt% as required by said claim) [0011].

**Regarding claims 9 and 10**, Yamamoto et al. discloses flame retardants substantially identical to the instant claim [0018]. However, Yamamoto et al does not explicitly disclose the melting point and melt viscosity. Since Yamamoto et al. does disclose flame retardants substantially identical to the instant claim, the claimed properties of the flame retardants would have the same results as the prior art, absent objective evidence to the contrary. “Products of identical chemical composition cannot have mutually exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F. 2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See MPEP 2112.01.

**Regarding claim 11**, Yamamoto et al. discloses a composition further comprising additional additives, such as UV absorbers, lubricants, colorants, antioxidants, or reinforcement additives [0015].

**Claim 2, 25-28, 30 and 31** are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto et al. (JP049324093A, see machine translation for citation).

**Regarding claims 2 and 25**, Yamamoto et al. discloses a composition comprising particles comprising one fluoropolymer (“granulated polytetrafluoroethylene”) and flame retardants ([0020],[0021]). Yamamoto et al. discloses that other additives may be added only if needed in that case, therefore the additives are optional [0015].

**Regarding claims 26 and 27**, Yamamoto et al. discloses a composition wherein said flame retardants are selected from organic bromine compounds (e.g. brominated bisphenol epoxy resin, tetrabromobisphenol A, brominated polystyrene, brominated alkyl triazine compound) [0018] or phosphorous compounds (e.g. octyl diphenyl phosphate) [0018].

**Regarding claim 28**, Yamamoto et al. discloses a composition containing an amount of fluoropolymer from 0.1 wt% to 50 wt% (as compared to from 0.1 wt% to 60 wt% as required by said claim) [0011].

**Regarding claims 30 and 31**, Yamamoto et al. discloses flame retardants substantially identical to the instant claim [0018]. However, Yamamoto et al does not explicitly disclose the melting point. Since Yamamoto et al. does disclose flame retardants substantially identical to the instant claim, the claimed properties of the flame retardants would have the same results as the prior art, absent objective evidence to the contrary. “Products of identical chemical composition cannot have mutually exclusive properties.” A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F. 2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See MPEP 2112.01.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 8 and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (JP049324093A, see machine translation for citation) as applied to claims 7 and 28 above.

**Regarding claims 8 and 29**, Yamamoto et al. discloses a composition as shown above in claim 7 and 28. Yamamoto et al. discloses a composition containing an amount of fluoropolymer from 0.1-50 wt% (as compared to from 0.5 wt% to 20wt% as required by said claim)[0011]. It would have been obvious to one of ordinary skill in the art at the time of invention to have selected the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to be a prima facie case of obvious. *In re Wertheim*,



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541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2144.05.

**Claims 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (JP049324093A, see machine translation for citation) as applied to claim 1 above in view of Nishihara et al. (US 6,093,760).

**Regarding claims 12 and 13**, Yamamoto et al. discloses the composition as shown above in claim 1.

However, Yamamoto et al. does not disclose the melt viscosity of the flame retardants or the flame retardant precursors. Yamamoto et al. further discloses that the PTFE composition can be blended with well-known thermoplastics, such as polystyrene [0016]. Nishihara et al. teaches a flame retardant having a low melt viscosity will prevent reducing the extrusion stability (C27/L16-31). Nishihara et al. and Yamamoto et al. are analogous art concerned with the same field of endeavor, namely thermoplastics, such as polystyrene with flame retardants. It would have been obvious to one of ordinary skill in the art to use the flame retardant of Nishihara et al. in the composition of Yamamoto et al., and the motivation to do so would have been as Nishihara et al. suggests to reduce the extrusion stability (C27/L16-31).

As the extrusion stability is variable that can be modified by adjusting said melt viscosity of flame retardant, the precise melt viscosity of flame retardant would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, melt viscosity of flame retardant, and the motivation

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to do so would have been to obtain desired extrusion stability (*In re Boesch*, 617 F.2d 272,205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). See MPEP 2144.05.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE M. BUIE whose telephone number is (571)270-3879. The examiner can normally be reached on Monday-Thursday with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571)272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MARK EASHOO, PhD./  
Supervisory Patent Examiner, Art Unit 1796  
7-Jul-08

/N. M. B./  
Examiner, Art Unit 1796  
6/26/2008